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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,482	10/20/2003	Xie Shao	27615-CNT2	7931
23589	7590	02/10/2006	EXAMINER	
HOVEY WILLIAMS LLP			LEE, SIN J	
2405 GRAND BLVD., SUITE 400			ART UNIT	
KANSAS CITY, MO 64108			PAPER NUMBER	

1752

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/689,482

Applicant(s)

SHAO ET AL.

Examiner

Sin J. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3-5, 16, 24, 25, 27, 36, 39, 41 and 45-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5, 16, 36, 41 and 45-47 is/are allowed.
- 6) ☒ Claim(s) 24, 25, 27 and 39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. In view of the amendment of November 10, 2005, previous 102(b) rejection on claims 39, 24, 25, 27 and 46 over Kojima et al'534 and previous 102(b) rejection on claim 41 over Usagawa et al (JP'651) are hereby withdrawn.
2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

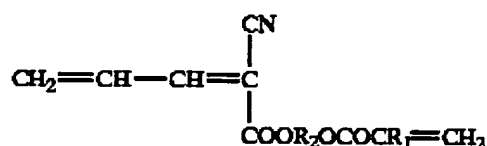
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

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granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 39, 24, 25 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Kotzev (US 2004/0249099 A1).

Kotzev teaches (see [0003]) a polymer of the following monomer:



In [0006], Kotzev teaches  $-\text{CH}_2\text{CH}_2-$  as one of several specific examples for  $\text{R}_2$ .

Therefore, one skilled in the art would immediately envisage  $\text{R}_2$  to be  $-\text{CH}_2\text{CH}_2-$ . The polymerization takes place through the (meth)acrylic bond (see [0009]). Such polymer teaches present polymer binder of claim 39 (Structure A of (III)): present  $\text{R}_1$ 's are H atoms and present EWG is  $-\text{CN}$ , and present  $\text{R}_2$  is  $-\text{COO}-\text{CH}_2\text{CH}_2-$  group (which is an electron-withdrawing group) and being bonded to the (meth)acrylic backbone.

Therefore, Kotzev teaches present inventions of claims 39, 24 and 25.

With respect to present claim 27, Kotzev teaches that his  $\text{R}_2$  group may be substituted by alkoxy, alkoxyalkoxy, carbalkoxyalkyl or *halogen*. Since there are only four choices given, one of ordinary skill in the art would immediately envisage Kotzev's  $\text{R}_2$  ( $-\text{CH}_2\text{CH}_2-$  group) substituted by halogen. Therefore, Kotzev teaches present invention of claim 27 ( $\text{CH}_2\text{X}$ ).

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5. Claims 39, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Woods et al (5,187,048).

Woods teaches (see abstract) a photoresist coating for use in microlithography comprising a polymer made from allyl 2-cyanopenta-2,4-dienoate, which structure is shown in Formula Va in which  $R^7$  is  $C_3$  alkenyl group. Such polymer teaches present polymer binder of claim 39 (Structure A of (III)): present  $R_1$ 's are H atoms and present EWG is  $-CN$ , and present  $R_2$  is  $-COO-CH_2-$  group (which is an electron-withdrawing group) and being bonded to the polymer backbone. Therefore, Woods teaches present inventions of claims 39, 24 and 25.

***Allowable Subject Matter***

6. Claim 3-5, 16, 36, 41 and 45-47 are allowed. Neither Kotzev nor Woods teaches present light attenuating compound of claim 46 (in Structure A of (III) in claim 46, present  $R_2$  can only be cyclic alkyls or acyclic alkyls). Previously cited Usagawa et al (JP'651) does not teach or suggest present EWG group of claim 41 (Usagawa's EWG is  $-C(=O)-N$  ). None of the cited prior arts teaches or suggests present light attenuating compound of claim 36, 45, or 47.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. Lee*

S. Lee  
February 5, 2006

*Sin Lee*

**SIN LEE**  
**PRIMARY EXAMINER**